

SUSTAINABLE ENVIRONMENTAL PRACTICES AND POLICIES (SEPP)



SECOND QUARTERLY NARRATIVE REPORT

**Reporting Period
November 1, 2003-January 31st, 2004**

Date: February 28, 2004

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INTRODUCTION:

The YMCA of the USA and the YMCA of Lebanon signed a cooperative agreement on July 15th, 2003 with the U.S. Agency for International Development to undertake an integrated environment program initiative aimed at improved environmental practices and policies for management of solid and water waste in rural Lebanon.

The environment program benefits directly *56 communities* throughout the country by establishing *four solid waste treatment centers* processing waste from 56 villages and *nine waste water treatment centers* treating water from 12 villages covering the Bekaa (South West), Nabatieh (Nabatieh), and the South (Jezzine). In addition, the YMCA will conduct *a comprehensive environmental educational program* focused on building the knowledge base on waste management practices and strengthening capacity in municipalities and local communities in sustainable environmental management. The YMCA of Lebanon provides technical resource material and practical solutions to waste management in rural areas in an effort to influence and forge a sound national environmental policy.

This report covers the executional phase of the program extending over the second quarter. This period included the monitoring of sewer networks, installation and studying the best technology that fits the wastewater treatment plant in the targeted community, building up the capacity of a team to implement the awareness campaigns and discussing the lessons learned from old projects of wastewater and solid waste treatment facilities.

Activities under this program are grouped into three components:

1. *Dissemination of knowledge* on environment management practices
2. *Physical infrastructure* for solid and waste water management
3. *Engaging in dialogue and influencing policy* on environmental management .

The narrative report will expose the activities achieved to the date component by component

COMPONENT 1

Dissemination of knowledge

On Environmental Management Practices

To promote better environmental management practices, YMCA sought the assistance of ECODIT . to evaluate the operation of existing solid waste management facilities and wastewater treatment plants. During the months of October and November, ECODIT conducted visits to four SWM facilities and four WWT plants.

During those visits ECODIT assessed the opinions and analyzed the attitudes of the local authorities and beneficiaries, mainly the municipalities, towards these projects and observed the daily operation, in order to understand the successes and difficulties related to the operation of these facilities.

Afterwards, the results of these visits were disseminated in two workshops to the local beneficiaries (mayors and technicians from municipalities) and YMCA staff. Those workshops are the first step in the preparation of lessons-learned reports. Following is a brief overview of those two workshops.

Detailed information on the achievements of the workshops during this period are all available in are presented in Appendix 1



Workshop 1. January 17th, 2004

The first workshop took place in Shqif club in Nabatieh, with the participation of 22 municipal members excluding YMCA and ECODIT staff. The participants represented the municipalities of the mohafaza of Nabatieh. Given that YMCA previous and planned projects based on the needs of this region are on solid waste management, the workshop focused on the results of the solid waste management facilities.

Workshop . 2. January 30th, 2004

Twenty-eight participants (excluding YMCA and ECODIT staff) attended the second workshop at the municipality of Rachaya. Other than the municipalities of the caza of Racahya, surrounding municipalities from the caza of Nabatieh, where wastewater treatment plants have been established, attended the worksho. Because the caza of Rachaya and surrounding villages is rich in natural water sources, which are constantly threatened by the increasing number of septic tanks due to population increase, the focus of YMCA in this region is on wastewater treatment plants. Therefore, the workshop focused on the results of the visits to the WWT plants. The participants benefited from the disseminated results and the experience of the municipalities where such plants have been established.

Both workshops addressed the same topics, each being addressed in the context of either solid waste management facilities or wastewater treatment plants. Those topics are:

- Institutional setting: addressing project administration and management such as, permit approvals, ownership and operation of waste facility, number of workers, population served, local participation (communities and municipalities), partnership agreements, etc.
- Used Technology: process, level of mechanization, maintenance requirements and history of repairs.
- Costs: actual capital and operation costs and comparing them to preliminary cost at the time of construction. Identifying the sources of these funds.
- Project impact: perceptions of local community toward the project, successes and difficulties, etc.
- General recommendations. improvement of preventive maintenance, setting daily schedule for workers, routine monitoring of process and product quality, marketing final product, adopting finance registry books, setting budget for these facilities as part of yearly municipal budget, follow up on public outreach needs, legitimization of these facilities by related public authorities, development of compost and treated water quality standards by related ministries.

COMPONENT 2

Physical Infrastructure

For Solid Waste Water Management.

Component 2 :

Physical infrastructure for Solid Waste Water Management.

The YMCA proposes to build 13¹ waste facilities in the country through the Sustainable Environmental Practices and Policies Program. The YMCA will develop 4 solid waste treatment centers involving 56 villages and 9 waste water treatment centers involving 12 villages. More than 56 communities and 1,953,500 persons will benefit directly from improved waste practices (i.e., safer disposal and treatment of solid waste and wastewater, protection of natural resources including water and soil). YMCA's proposed facilities will also transform part of the waste stream into valuable by-products such as compost (a high-value soil conditioner) and treated wastewater (an important source of irrigation water in summer).

The YMCA has identified a new technology that will be applied to manage larger amounts of daily solid waste. This technology will use:

- Concrete rows to accumulate all sorted organic waste
- Ventilation pipes and electrical blowers to provide air for the composting system.
- Turner system for mixing the compost to become homogeneous, fluffy and mature.
- New equipment for measurement and registration of compost temperature and humidity.

Although YMCA is looking for such new composting technologies for domestic solid waste, it has faced some community leaders that refused to proceed in these projects due to negative perceptions of the potential impacts. (i.e. smell, fumes, leachate, misoperation, cumulation of solid wastes of other villages, ...) YMCA still works with local leaders to identify alternate sites and to explain to them the importance and impact of waste sorting, waste reduction and management. Videotapes were prepared to facilitate the presentation of techniques and management of solid wastes.

This process may cause a temporary delay in Jezzine and Rihan solid waste management facilities.

The YMCA applies ongoing technological enhancements in order to best address specific concerns which may arise from each project site and to ensure that the SEPP program accesses the latest research and improvements in the technology.

Solid Waste Treatment Centers: (4 centers)**1. CHKEEF CENTER (60 TONS/DAY)**

The Chkeef Municipalities Union (CMU) will be the major partner in the project implementation. The Chkeef Municipalities Union approved and provided a piece of land in Zawtar el Gharbieh to build a solid waste facility capable of treating 60 tons per day.

A Contract agreement between YMCA and Chkeef Municipality Union representatives was signed. The YMCA finalised the terms of the bidding documents for the Solid Waste Treatment Facility tender and ready to be published.

Village Served	Number of Households	Number of individuals	Altitude (m)
Nabatiye	5,714	40,000	400
Harrouf	1,285	9,000	400
Jibshit	1,428	10,000	400
Zawtar ElGharbiyeh	360	2,500	400
Zawtar El Charqiyeh	365	2,550	400
Kfartebnit	995	6,950	400
Nabatiye El Fawqa	1,121	7,850	400
Qaaqayat ElJisr	821	5,750	400
Habbouch	1,400	9,800	400
Zoubdin	475	3,350	400
Mayfadoun	760	5,300	400
AlKfour	575	4,000	400
Kfarrouman	1,355	9,500	400
13 Villages	16,654	116,550	

2. RACHAYAH CENTER (15 TONS/DAY)

Three essential meetings were held with the municipalities and the local communities in Rachaya. Two technical presentations were given to inform the interested parties on the benefits of the technology and the need for sound environmental practices.

The Rachaya Municipality Council (RMC) offered three pieces of land in Rachaya village to build a solid waste treatment facility of 15 tons daily capacity. YMCA engineers selected one of them taking in consideration the prevailing parameters: the speed of wind, distance from the nearest house, its relative location to the surrounding villages, the type of soil and its topographical site (hills, valleys, etc.). The procedure for signing the contract agreement between the municipality and the YMCA is still pending awaiting to get a final municipal decision from Rachaya Municipal Council to buy the specified land.

Village Served	Number of Households	Number of Individuals	Altitude (m)
Rachaya	1,200	7,000	1,250
Ayha	500	3,000	1,250
Mhaidseh	300	1,800	1,200
Daher El Ahmar	500	3,000	1,150
Ain Atta	400	2,400	1,400
Tannoura	200	1,000	1,000
Ain Harcha	200	1,000	1,050
Beit Lahia	100	600	1,000
Kfarmichki	160	1,000	1,250
El Houche	100	600	800
AlAakaba	350	2,100	850
Kawkaba	170	1,000	1,000
Majdel Balhis	240	1,500	1,350
Bakkifa	160	1,000	950
15 Villages	4,580	27,000	

3. RIHAN CENTER (10 TONS/DAY)

This Rihan solid waste management facility was intended to be implemented in Rihan village . However, complaints from the Rihan community altered the initial proposed plans. Then the mayor of Kfarhoua village proposed to find a piece of land for the project, but also they failed due to community complaints. Then the Aramta's mayor called the YMCA office to give him a chance to find a land and he will give us his final answer on 23/02/2004 .

Village Served	Number of Households	Number of Individuals	Altitude (m)
ElRihane	1,000	7,000	1,350
Mlikh	200	1,000	900
Soujoud	400	2,400	1,000
Aychiyyeh	150	750	600
Srire	90	550	900
Kotraneh	40	200	1,000
Aaramta	700	5,000	1,200
Lwayzeh	300	2,400	650
El Jarmak	100	600	550
9 Villages	2,580	16,900	

4. JEZZINE CENTER (20 TONS/DAY)

Initially, this new center was not included in the original proposal; however, due to the division of the Rihan facility into 2 centers, the YMCA set a new center in Jezzine to treat the solid waste of Jezzine area. The mayor of Jezzine proposed a piece of land in Jezzine area, but close to Kfarhouna village. This fact raised high complaints from Kfarhouna community and altered the proposed land. YMCA will try to find new land in other villages in Jezzine area before the end of March 2004. (Note that this period is very critical due to the election of new municipality members)

Village Name	Number of Household	Number of Individuals	Altitude (m)
Jezzine	2,000	12,000	950
Bkassine	450	2,250	900
Benawti	150	2,000	800
Almidan	160	1,000	800
Alharf	50	300	850
Qaytouli	600	3,000	800
Machmouchi	65	300	950
Sabbah	85	425	1,000
Saydoun	150	750	700
Rimat	50	250	800
Hidal	75	375	800
Snayyah	75	500	800
Haytoura	125	750	1,000
Bteddine Loukech	150	750	750
Roum	600	4,200	1,000
Azour	150	750	1,000
Homsieh	100	600	1,000
Wadi Jezzine	100	600	750
Aarayeh	100	600	700
Kfarhouna	600	3,500	1,200
20 villages	5,835	34,900	

WasteWater Networks and Treatment Centers

All centers will be designed taking into strict consideration the fact that all these villages are summer resorts which means that the number of residents increases during summers and that the wastewater flow increases proportionally.

A. SOUTH LEBANON CENTERS (5 CENTERS).

1) Wadi Jezzine Center:

VILLAGE NAME	WADI JEZZINE
Range of Population served (capita)	600-1200
Forecast population served (capita)	1500
Altitude (m above sea level)	750
Wastewater Treatment plant (m ³)	150
New Sewer Network Length (m)	2000

The project consists of installing 2000 m of sewer network and building a treatment plant of 150 m³/day capacity.

The Mayor prepared and submitted all the topographical plans and maps for the sewer network, manholes and the land for the treatment plant. YMCA engineers have studied the plans, completed a detailed report and determined the project cost. Following this, the contract agreement between YMCA and the municipality has been signed and the sewer network has been completed (2000m).

Six Quotation offers for the treatment plant were submitted to YMCA.

A contract Agreement between the contractor and YMCA was signed.

The Environmental assessment is in the pipe line.



2) Jezzine Center:

VILLAGE NAME	JEZZINE
Range of Population served (capita)	6000-8000
Forcast population served (capita)	12000
Altitude (m above sea level)	950
Wastewater Treatment plant (m ³)	1000
New Sewer Network Length (m)	0

The project consists of building a treatment plant of 1000 m³/day capacity.
The Mayor started negotiations with the council of the south to raise funds in support of the project before end of February, 2004.

3) Snayyah Center:

VILLAGE NAME	SNAYYAH
Range of Population served (capita)	400-500
Forcast population served (capita)	600
Altitude (m above sea level)	800
Wastewater Treatment plant (m ³)	60
New Sewer Network Length (m)	2040

The project consists of installing 2040 m of sewer network and building a treatment plant of 60 m³/day capacity.

The Mayor prepared and submitted all the topographical plans and maps for the sewer network, manholes and the land for the treatment plant.

YMCA engineers have studied the plans, made a detailed report and determined the project cost.

The contract agreement between YMCA and the municipality has been signed.

The sewer network has been completed (2040m).

Six Quotation offers for the treatment plant were submitted to YMCA.

A contract Agreement between the contractor and YMCA was signed.

The Environmental assessment is in the pipe line.



4) Aychiyyeh Center :

VILLAGE NAME	AYCHIYYEH
Range of Population served (capita)	700-1250
Forcast population served (capita)	1500
Altitude (m above sea level)	750
Wastewater Treatment plant (m ³)	150
New Sewer Network Length (m)	3588

The project consists of installing 3588 m of sewer network and building a treatment plant of 150 m³/day capacity.

The Mayor prepared and submitted all the topographical plans and maps for the sewer network ,manholes and the land for the treatment plant.

YMCA engineers studied the plans, made a detailed report and determined the project cost. All is set to proceed the implementation. The contract agreement between YMCA and the municipality was signed. The access road to the treatment plant site was excavated.

The work s in the sewer network has been recently started .

Six Quotation offers for the treatment plant were submitted to YMCA.

A contract Agreement between the contractor and YMCA was signed.

The Environmental assessment is in the pipe line.

5) Al Ghobbatieh Center:

VILLAGE NAME	MACHMOUCHEH	BENWATI	AL GHOBATTIEH	TOTAL
Range of Population served (capita)	300-400	1750-1800	200-250	2300- 2450
Forcast population served (capita)	500	2000	300	2800
Altitude (m above sea level)	950	800	700	
Wastewater Treatment plant (m ³)	0	0	250	250
New Sewer Network Length (m)	Executed	Executed	5500	5500

The project consists of installing 5500 m of sewer network and building a treatment plant of 250 m³/day capacity.

Machmoucheh has a sewer network which was previously executed and discharged in Benawati village. Benwati also has a sewer network which was previously executed that discharges in the fields without any treatment. Al Gobbattieh is a part of Benwati village and has the lowest site that fits best for the local of the treatment plant of the three villages. These villages will be crowded during summer season due to their attractive climate at that period.

The Mayor of Benwati prepared and submitted all the topographical plans and maps for the sewer network, manholes and the land for the treatment plant.

YMCA engineers studied the plans, made a detailed report and determined the project cost. All preliminary meetings with the three villages have been completed. The Mayor of Benwati started negotiations with the council of the south to raise funds in support of this project before end of February 2004.

B. BEKKA CENTERS (4 CENTERS).**1) Rachaya Center:**

VILLAGE NAME	RACHAYA
Range of Population served (capita)	4000-6000
Forecast population served (capita)	7000
Altitude (m above sea level)	1250
Wastewater Treatment plant (m ³)	700
New Sewer Network Length (m)	8000

The project consists of installing 8000 m of sewer network and building a treatment plant of 700 m³/day capacity.

The Mayor submitted the topographical plans and maps for the sewers network ,manholes and the land for the treatment plant.

YMCA engineers have studied the plans, made a detailed report and determined the project cost.

The contract agreement between YMCA and the municipality will be signed soon.

2) Alakaba center:

VILLAGE NAME	ALAKABA
Range of Population served (capita)	1800-2100
Forecast population served (capita)	2500
Altitude (m above sea level)	850
Wastewater Treatment plant (m ³)	250
New Sewer Network Length (m)	2000

The project consists of installing 2000m of sewer network and building a treatment plant of 250 m³/day capacity.

All preliminary meetings with the local community were done. The site of the treatment plant was chosen.

The Mayor submitted the topographical plans and maps for the sewers network ,manholes and the land for the treatment plant.

YMCA engineers have studied the plans, made a detailed report and determined the project cost.

The contract agreement between YMCA and the municipality will be signed soon.

3) Bakka Center:

VILLAGE NAME	BAKKA
Range of Population served (capita)	600-800
Forcast population served (capita)	1000
Altitude (m above sea level)	1200
Wastewater Treatment plant (m ³)	100
New Sewer Network Length (m)	4370

The project consists of installing 4370m of sewer network and building a treatment plant of 100 m³/day capacity.

The Mayor prepared and submitted all the topographical plans and maps for the sewers network ,manholes and the land for the treatment plant.

YMCA engineers studied the plans, made a detailed report and determined the project cost.

All is set to proceed the implementation. The contract agreement between YMCA and the municipality has been signed.

1800 m of the sewer network have been executed .

Six Quotation offers for the treatment plant were submitted to YMCA.

A contract Agreement between the contractor and YMCA was signed.

The Environmental assessment is in the pipeline .



4) Ain Arab center:

VILLAGE NAME	AIN ARAB
Range of Population served (capita)	600-800
Forecast population served (capita)	1000
Altitude (m above sea level)	1250
Wastewater Treatment plant (m ³)	100
New Sewer Network Length (m)	2000

The project consists of installing 2000m of sewer network and building a treatment plant of 100 m³/day capacity

The Aayha center was substituted by the Ain Arab center after the approval of USAID, since the Aayha mayor stated that he could not afford the local contribution for the project.

All preliminary meetings with the local community have been completed. The site of the treatment plant has been selected.

The Mayor submitted the topographical plans and maps for the sewers network ,manholes and the land for the treatment plant.

YMCA engineers have studied the plans, made a detailed report and determined the project cost.

The contract agreement between YMCA and the municipality has been signed recently.

COMPONENT 3

Engaging in Dialogue and Influencing Policy on Environmental Management .

The YMCA will dedicate significant efforts to engage in dialogue and influence policies with key stakeholders that include the Government of Lebanon, parliament, municipalities, local NGOs and communities.

The YMCA will design and implement an ambitious high-visibility policy dialogue to influence national policies on waste management away from current centralized solutions and approaches towards the adoption of appropriate and cost effective technologies locally adapted.

Through a combination of white papers, seminars, and guided tours to selected waste management facilities, YMCA will engage in high-level policy dialogue that will target a large number of politicians, including members of Parliament, Directors General, senior government staff and the media. YMCA anticipates that as a result of this sustained high-level awareness campaign and policy dialogue, the GoL eventually will adopt the paradigm shift that has started to take root in different government circles and municipalities - away from centralized waste treatment technologies and approaches towards decentralized, appropriate treatment technologies and approaches for rural areas. In particular, the YMCA anticipates that the GoL will promulgate solid waste and wastewater decrees that build on the lessons-learned and policy recommendations of the YMCA team.

1) Material developed for the Awareness Campaigns:

The pamphlet was prepared and it will be ready to be distributed to the target population as soon as the training sessions start. (Attached is a copy of the pamphlet Appendix E)

Also, two power point presentations were prepared to be given in the training sessions in the selected villages: one for the children and the other for the older population. The presentations will aim at teaching the population the proper techniques of solid waste management after showing them the hazards of random and improper disposal of wastes. Also, the presentations will help guide the population to shop environmental friendly products. The presentations will be given on a regular basis in the training sessions.

2) Training of Trainers Session:

The training of trainer session was held on November 29, 2003 as planned in the presence of Mr. Ghassan Sayah and Mrs. Sana Saliba.

A group of 23 young men and women attended the session and a fully detailed presentation was given stressing the technical, educational, and the social parts of the program. The pupose of the session is to prepare this voluntary team to help in the awareness campaign in the villages by working with the population and helping them in any question or problem they would like to ask about.

Further follow-up sessions (meetings, workshops, ...) are being planned for between YMCA and the voluntary team to make the team more homogeneous and also to make sure that the information is fully understood and ready to be distributed to the target population before we the campaigns start.

3) Schedule of Trainings:

The schedule of the training sessions that will be held in the target villages is being planned for to be able to start the campaigns as soon as possible.

Conclusion:

Project implementation is on target with a few minor exceptions where further dialogue and negotiation with the local leaders and communities is ongoing. All other aspects are on track. Program participants are demonstrating a high level of interest and commitment to addressing the critical environmental management concerns in their communities. During the next Quarter, the YMCA will focus on:

- a) Helping the local leaders in Jezzine and Rihan areas to find the appropriate land to be used as solid waste treatment facility.
- b) Realizing many training workshops on solid waste sorting at the sources:
 1. schools
 2. houses
 3. offices
 4. general community
- c) completing all ongoing projects before the new election of the municipality members during May 2004.

In December, the Dr. Kenneth L. Gladish, National Executive Director of the YMCA of the USA, Mr. Jerry Prado-Shaw, Director of the International Group, and Ms. Selma Zaidi, Deputy Director of the International Group made a field visit to observe the progress of the program. A site visit was made to Akkar. Discussions were held in the office with the staff on the ongoing progress of the program. A meeting was held between the YMCA of the USA leaders and USAID Mission Director, Raouf Youssef.

The YMCA of the USA and the YMCA of Lebanon are grateful to USAID for their support for the Sustainable Environmental Practices and Policies program.



APPENDIX 1:

LESSONS LEARNED WORKSHOP #1

LESSONS LEARNED WORKSHOP #2

SUSTAINABLE ENVIRONMENTAL PRACTICES AND POLICIES

LESSONS LEARNED WORKSHOP #1

**Shqif Club, Nabatieh
January 17, 2003**

This report summarizes the key proceedings from the first public workshop that YMCA organized and ECODIT facilitated on January 17, 2003, in Shqif Club (Nabatiyeh). This report is organized in five sections as follows:

1. Workshop objectives;
2. Workshop participants;
3. Workshop overview;
4. Highlights of key exchanges; and
5. Workshop evaluation.

Workshop objectives

The workshop objectives were to:

- Present and discuss the results of the site visits conducted by ECODIT to YMCA's solid waste management (SWM) facilities;
- Solicit comments and feedback from the audience on the results of the site visits; and
- Propose recommendations to improve the operation of existing SWM facilities and enhance the implementation of new facilities.

Workshop Participants

Twenty-two participants (mostly mayors and members of municipal councils) were present at the workshop in Shqif Club, excluding YMCA staff and ECODIT. Appendix A presents the names and titles of all the participants.

Workshop Overview

The workshop was divided into two sessions (see workshop program in Appendix B):

- Session 1: Introduction to the SEPP program and the workshop objectives; and
- Session 2: Results of ECODIT site visits to SWM plants.

Karim El-Jisr introduced Session 1 and Joseph Kassab described the objectives and scope of the SEPP program. Karim and Michelle Bachir then presented Session 2, covering the following topics (see details in workshop PowerPoint presentation):

1. Institutional framework for SWM
2. SWM technologies
3. Capital, operation and maintenance costs
4. Public perceptions

During this session, ECODIT highlighted the (1) successes and (2) difficulties of the SWM plants and presented targeted recommendations on how to overcome these difficulties in the future.

4. Highlights of Key Exchanges

We have summarized below key highlights and discussion points.

- The upcoming municipal elections may accelerate the implementation of SWM facilities as mayors and members of the current municipal council will want to showcase their achievements to market their candidacy prior to the elections.
- It is important to launch immediately the construction of the proposed SWM facilities (e.g., Nabatiyeh) to (1) prevent the allocation of municipal funds away from SWM to other less pertinent and more politically driven projects, and (2) set the stage for the new municipal council to continue the construction of the MSW plant.
- Several mayors considered that the municipalities lack both the technical and financial resources to promote environmental awareness. They believe that environmental awareness is entirely the responsibility of local NGOs.
- Joseph Kassab emphasized the critical role of municipalities in overseeing the construction and operation of the SW plant. In essence, they are the “project manager” behind the project. While it is true that NGOs may play a leading role in promoting source separation, the municipality should play an equally important role in monitoring the collection of source-separated waste and finding outlets for recyclables.
- Several mayors raised questions about the fate of these projects in light of government plans for solid waste management in the country. Other mayors urged their reticent colleagues to resolve the solid waste crisis locally as the Government’s vision remained blurred. They also questioned the Government’s capacities to implement the national plan for SWM, if/when such a plan would emerge, and provide financial support to municipalities for implementing SWM activities.

5. Workshop Evaluation

The workshop participants were summoned to a meeting with the Governor of South Lebanon at 1h30 PM – consequently there was no time to organize an evaluation session (the meeting with the Governor was set *after* publicizing the YMCA workshop date). However, ECODIT and YMCA prepared a joint evaluation of the workshop. Key successes and difficulties are presented next.

5.1 Successes

1. Workshop participants were numerous and diverse. However, there was only one participant with SWM experience – mayor of Taybeh – but this plant is still under construction (see difficulty below).
2. The audience was interested and alert, in part due to the mix of presentation tools (photos, text, and tables). Also, the transition between the three presenters (Karim, Michelle and Joseph) was smooth.
3. Reaching consensus on the role of municipalities in SWM and the need to initiate waste projects even in the absence of a national strategy for SWM in the country.
4. Joseph Kassab presented a draft maintenance program that YMCA will share with those municipalities that host or will host SWM facilities.
5. The workshop material was clear and comprehensive and provides ample reading materials for mayors, and municipal staff involved in SWM.

5.2 Difficulties

1. There were no representatives from existing SW treatment facilities (e.g., Kfarsyr, Mays el Jabal). Consequently, the workshop did not provide the opportunity for direct exchange among “old” and “new” project beneficiaries.

Recommendation: Make sure representatives from existing SW (and wastewater) treatment facilities participate during the remaining lessons-learned workshops.

2. There were no technicians or municipal engineers among the participants. Consequently, the discussions were limited to “management” issues and the national debate on how to decentralize SWM.

Recommendation: Invite technicians and municipal engineers to the remaining lessons-learned workshops.

Appendix A

Workshop Participants

#	Name	Institution
1.	Joseph Kassab	YMCA
2.	Issam Karam	
3.	Hussein Salameh	
4.	Habib Yaghi	Municipality of Zawtar el Gharbieh
5.	Hussein Inayssi	
6.	Kassem Salim	
7.	Moussa Saad	Municipality of Kfour
8.	Ali Darwish	
9.	Nemer Bazzi	Municipality of Bent Jbeil
10.	Sotam Abou Zaid	Municipality of Kfarroman
11.	Mohamed El Souli	Municipality of Taybeh
12.	Hassan Kazan	
13.	Samih Halal	Municipality of Habbouch
14.	Mohmaed Hattab	
15.	Assad Ghandour	Municipality of Nabatieh Fawqa
16.	Rached Ghandour	
17.	Mohamed Touby	Municipality of Mayfadoun
18.	Adham Touby	Municipality of Mayfadoun
19.	Ali Shouaib	Municipality of Al Charqieh
20.	Riad Ismaïl	Municipality of Zawtar Al Charqieh
21.	Chawqi Harb	
22.	Nadim Serhan	Municipality of Kfartebnit
23.	Mohamed Hayek	
24.	Ahmed El Hajj Ali	Municipality of Nabatieh Tahta
25.	Edmond Chdid	Al Nahar newspaper
26.	Karim El Jisr	ECODIT
27.	Michelle Bachir	

Appendix B

9:30 – 10:00	Registration
<u>10:00 – 10:30</u>	Session 1: Welcome and Objectives <ul style="list-style-type: none">• Introductions• Workshop Program• Objectives of SEPP program• Workshop Objectives
10:30 – 12:45	Session 2: Successes and Difficulties of SWM Facilities <ul style="list-style-type: none">• Institutional framework• SWM technologies• Capital, operation and maintenance costs• Public perceptions
12:45 – 13:00	Lunch

Workshop Program (As Executed)

SUSTAINABLE ENVIRONMENTAL PRACTICES AND POLICIES

LESSONS LEARNED WORKSHOP #2

Municipality of Rachaya (Rachaya)
January 30, 2004

This report summarizes the key proceedings from the second public workshop that YMCA organized and ECODIT facilitated on January 30, 2003. The workshop was held in Rachaya's public library. This report is organized in five sections:

- 1. Workshop objectives;*
- 2. Workshop participants;*
- 3. Overview of workshop;*
- 4. Highlights of key exchanges; and*
- 5. Workshop evaluation.*

... and 4 appendices:

- A) Workshop Participants*
- B) Workshop Program (as executed)*
- C) Results of Brainstorming Session*
- D) Photos*

Workshop Objectives

The workshop objectives were to:

- Present and discuss the results of the site visits conducted by ECODIT to YMCA's wastewater treatment plants;
- Propose recommendations to improve the operation of existing wastewater treatment plants and draw lessons learned prior to the construction of new plants; and
- Present a summary account of YMCA's solid waste management experience to the audience

Workshop Participants

Twenty-eight participants attended this workshop including mayors, members of municipal councils, and technicians (not including ECODIT and YMCA). Christine Sayegh of USAID was also at the workshop.

Appendix A contains the full list of workshop participants.

Overview of Workshop

The workshop was divided into three sessions (see program in Appendix B):

- Session #1: Introduction to SEPP and workshop objectives;
- Session #2: Results of ECODIT site visits to YMCA's wastewater treatment plants; and
- Session #3: Presentation on YMCA's solid waste management plants (video)

Following a welcome note by Fares Fayeq, mayor of Rachaya, Karim El-Jisr of ECODIT Liban and Joseph Kassab of YMCA presented Session 1 and concluded that session with a brainstorming exercise. The participants were asked to brainstorm the potential successes and difficulties of YMCA's wastewater treatment plants. The results of the brainstorming exercise are presented in Appendix C. Karim El-Jisr and Michelle Bachir then gave Session 2 on the results of the site visits. The results were grouped into four categories:

- Institutional framework
- SWM technologies
- Capital, operation and management costs
- Public perceptions

During this session, ECODIT highlighted the (1) successes and (2) difficulties of the wastewater treatment plants and presented targeted recommendations on how to overcome these difficulties in the future.

During Session 3, we presented a 10-minute film prepared by YMCA showing the components of the SW treatment plants and pertinent O&M issues. The film was shot in Mays el Jabal and Al Taybeh treatment plants.

4. Highlights of Key Exchanges

We have summarized below key highlights and discussion points.

- Electricity: The mayor of Yanta complained that Electricité du Liban (EDL) has so far delayed the transfer of electricity to their wastewater plant. While, the Municipality of Yanta has purchased and installed a transformer (with support from the Ministry of Energy and Water), EDL is charging LBP17 million in hook-up fees alone!
 - ? ECODIT should contact EDL and investigate procedures for installing electricity meters and related costs.

- Lack of support from national authorities: Municipalities complained about the lack of support from several key authorities, such as EDL, and asked YMCA to exercise more pressure on these authorities in an effort to seek their active support.
? Clearly, putting pressure on public agencies is the responsibility of municipalities (and the Ministry of Interior), not YMCA.
- Cost sharing: Municipalities are able to minimize the costs of construction activities by implementing the works themselves, using local resources and/or overseeing the implementation. Consequently, the cost-share borne by municipalities is lower than the target cost-share of 30%. The minimum cost-share under SEPP is 50%.
- Disposal of margine and effect on wastewater charge: during the olive season (Oct-Nov), olive producers dump margines directly into sewage systems increasing the charge of wastewater and burdening the wastewater treatment plant. In fact, the plants are not designed or equipped to handle industrial-like wastewater and consequently cannot treat margines.
? It is the responsibility of municipalities to monitor the safe disposal of margines away from sewage collection systems. Municipalities should require olive mills to treat their margines onsite.
- Sampling and analysis: Karim emphasized the need to routinely collect samples even after the successful launching of the plant. The quality of wastewater effluent may vary depending on how well the plant is operated and monitored.

Questions/comments regarding SWM film:

- Mayors inquired about space requirements for building and operating a composting plant; total process time (fermentation and maturation); and overall system costs.

Appendix (Workshop Participants)

#	Name	Institution	Telephone Number
28.	Joseph Kassab	YMCA	01 490 640
29.	Issam Karam		
30.	Ghassan Saab		
31.	Hussein Salameh		
32.	Christina Sayegh	USAID	
33.	Damen Abou Zour	Municipality of Tannoura	03 752 319
34.	Mahmoud Hijaz	Municipality of Bkifa	08 590 679
35.	Nazmi Nasr Allah	Municipality of Kfarmichki	03 685 333
36.	Elie Saab		03 701360
37.	Walid El Hajj	Municipality of Mari El Zouhour	03 965 709
38.	Samir Hadaya		03 726 325
39.	Issam Kimach	Municipality of Ayma	03 832 129
40.	Jebrayel Eid	Municipality of Ain Horsha	08 520 184
41.	Issam El Halabi	Municipality of Yanta	03 587 678
42.	Joseph El Assiss	Municipality of Ain Arab	03 708 936
43.	Yasser Khalil	Municipality of Bakka	03 967 320
44.	Kamal Nouair	Municipality of Mimes	03 847 553
45.	Wahid Madi		03 711 901
46.	Fouad Moudah		03 711 901
47.	Ibrahim Sabeh	Mukhtar Mimes	03 781 363
48.	Said Al Barasighi	Municipality of	08 591 530
49.	Mounif El Sebe'li	Municipality of Beit Lahya	03 626 020
50.	Boutros Ibrahim		08 591 249
51.	Fares Faye	Municipality of Rachaya	03 891 518
52.	Chady Abou Malek	Municipality of Rachaya	03 625 755
53.	George Al Maalouli	Mukhtar Rachaya	08 890 060
54.	Adel El Laham	Mukhtar Rachaya	08 591 707
55.	Raif Ferhat	Mukhtar Rachaya	08 590 150
56.	Naji Abou El Izz	Municipality of Kfeir	03 776 624
57.	Hani Jaber	Municipality of Dahr El Ahmar	03 567 011
58.	Hussein Amer	Mukhtar El Khelwat	03 801 227
59.	Fouad Hamed	Municipality of Aqaba	03 722 816
60.	Karim El Jisr	ECODIT	01 566 784
61.	Michelle Bachir		

Appendix B

10.00 – 10.30	Registration
<u>10:30 – 11.00</u>	Session 1: Welcome and Objectives <ul style="list-style-type: none"> • Introductions • Workshop program • Objectives of SEPP program • Workshop objectives
11.00 – 12:45	Session 2: Results of Site Visits to Wastewater Treatment Plants and Recommendations <ul style="list-style-type: none"> • Institutional framework • SWM technologies • Capital, operation and maintenance costs • Public perceptions
12.45 – 13.15	Session 3: SWM Film and Discussions
13.15 – 14.00	Lunch

Workshop Program (As Executed)

Appendix D

Workshop Photos



Appendix E



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